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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,373	07/31/2003	Keith Son	5693P290X	5120
48102 7590 04/27/2007 NETWORK APPLIANCE/BLAKELY 12400 WILSHIRE BLVD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			EXAMINER VIDWAN, JASJIT S	
			ART UNIT	PAPER NUMBER
			2182	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/27/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/633,373

Applicant(s)

SON, KEITH

Examiner

Jasjit S. Vidwan

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-18,20-22 and 24-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-18,20-22 and 24-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Page 16 of Applicant's submitted specification includes a hyperlink to SFF-8045 documentation. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, 5, 8, 9, 11, 12, 13, 14, 15, 17, 18, 20, 21, 22, 25, 26, 28, 29, 30, 31 and 36, are rejected under 35 U.S.C. 103(a) as being unpatentable over Barth et al, U.S. Pub.No: 2003/0191872 **[herein after Barth]** and further in view of Schimke et al, U.S. Pub No: 2002/0174197 **[herein after Schimke]**

3. **As per Claim 1, 5, 18 and 22**, Barth teaches an apparatus including:

(a) Disk drive housing **[see Fig. 2, elements 200, 210 and 220 – Though the figure is labeled as “prior art”, Barth’s improvement is solely focused on the Adaptor [Fig. 2, element 200] and not the whole system – Examiner construes Barth’s teaching as follow: Since Barth teaches having a ATA hard disks as its devices (200, 225), it is inherent that the above elements will be stored within some housing]** defining a volume large enough to include an ATA disk drive therein **[see Barth, Paragraph 0004 – Barth teaches having ATA hard disks as its attached devise – “Large enough to**

include an ATA disk drive” i.e. Barth’s computer system including the above elements]

(b) Adaptor in said housing **[see Abstract, “ATA (Advanced Technology Attachment controller”]**, said adaptor including an ATA disk drive coupling element **[see Fig. 3, elements 130, 210 and 215, “Parallel Port” & “Serial Port”]** and at least two backplane coupling elements **[see Fig. 3, elements 305, 210, “Target Interface” & “Source Interface”]**

(c) Programmable switch **[see Fig. 3, element 335]** coupled to said backplane coupling elements to control selection of one of at least two paths by which the ATA disk drive can be coupled to the backplane **[see Paragraph 0026, “...there may be provided a port assignment unit which may be used for switching between the parallel and serial ports”]**

(d) Serial-to-Parallel converter **[see Page 4, Claim 14, “...converting serial data to parallel data to enable data to and/or from SATA compliant storage devices”]**, said serial-to-parallel converter being within said disk drive housing and coupled to said ATA disk drive coupling element **[Fig. 3, elements 335, 210 – As can be seen, Port Assignment Unit is coupled to serial port]**, wherein said serial-to-parallel convert is capable of receiving a set of serial ATA disk drive signals from a serial ATA disk operatively coupled to said ATA disk drive and emitting a set of parallel ATA disk drive signals **[see above cited Page 4, Claim 14]**

(e) Parallel-to-serial converter in a second one of the at least two paths **[see Page 2, Paragraph 0026, “Another function performed by the port assignment unit is that of the parallel/serial converter i.e., it performs conversion of parallel to serial data signals and vice versa”]**, said parallel-to-serial converter being within said disk drive housing and coupled to said ATA disk drive coupling element **[Fig. 3, elements 335, 130 – As can be seen, Port Assignment Unit is coupled to parallel port]**, wherein the said parallel-to-serial converter is capable of receiving a set of parallel ATA disk drive

signals from a parallel ATA disk operatively coupled to said ATA disk drive and emitting a set of serial ATA disk drive signals [see Page 2, Paragraph 0026]

Barth fails to teach an apparatus wherein the two coupling elements are Fiber Channel coupling elements wherein the Fiber channel backplane is coupled to first and second housing. Schimke teaches the above limitations of having Fiber Channel interfaces coupled to FC backplane [see Schimke, Page 2, Paragraph 0020, "Devices 120-130 are typically peripheral devices such as storage devices with FC interfaces and are coupled to the FC-AL on a backplane provided by hub"].

One of ordinary skill in the art at the time of Applicant's invention would have clearly recognized the advantage of combining teachings of Barth with that of Schimke in order to achieve higher reliability during fail over through the employing Fiber Channel Arbitration Loop interconnection system [Page 2, Paragraph 0020]. It is for this reason that one of ordinary skill in the art at the time of Applicant's invention would have been motivated to combine the two teachings in order to achieve higher reliability during fail over through the employing Fiber Channel Arbitration Loop interconnection system [Page 2, Paragraph 0020].

4. As per Claim 9 and 26, Barth teaches an apparatus including:

(a) Disk drive housing [see Fig. 2, elements 200, 210 and 220 – Though the figure is labeled as "prior art", Barth's improvement is solely focused on the Adaptor [Fig. 2, element 200] and not the whole system – Examiner construes Barth's teaching as follow: *Since Barth teaches having a ATA hard disks as its devices (200, 225), it is inherent that the above elements will be stored within some housing*] defining a volume large enough to include an ATA disk drive therein [see Barth, Paragraph 0004 – Barth teaches having ATA hard disks as its attached devise – "Large enough to include an ATA disk drive" i.e. Barth's computer system including the above elements]

(c) Programmable switch **[see Fig. 3, element 335]** coupled to said backplane coupling elements to control selection of one of at least two paths by which the ATA disk drive can be coupled to the backplane **[see Paragraph 0026, "...there may be provided a port assignment unit which may be used for switching between the parallel and serial ports"]**

(d) Serial-to-Parallel converter **[see Page 4, Claim 14, "...converting serial data to parallel data to enable data to and/or from SATA compliant storage devices"]**, said serial-to-parallel converter being within said disk drive housing and coupled to said ATA disk drive coupling element **[Fig. 3, elements 335, 210 – As can be seen, Port Assignment Unit is coupled to serial port]**, wherein said serial-to-parallel convert is capable of receiving a set of serial ATA disk drive signals from a serial ATA disk operatively coupled to said ATA disk drive and emitting a set of parallel ATA disk drive signals **[see above cited Page 4, Claim 14]**

(e) Parallel-to-serial converter in a second one of the at least two paths **[see Page 2, Paragraph 0026, "Another function performed by the port assignment unit is that of the parallel/serial converter i.e., it performs conversion of parallel to serial data signals and vice versa"]**, said parallel-to-serial converter being within said disk drive housing and coupled to said ATA disk drive coupling element **[Fig. 3, elements 335, 130 – As can be seen, Port Assignment Unit is coupled to parallel port]**, wherein the said parallel-to-serial converter is capable of receiving a set of parallel ATA disk drive signals from a parallel ATA disk operatively coupled to said ATA disk drive and emitting a set of serial ATA disk drive signals **[see Page 2, Paragraph 0026]**

(f) Second switch coupled to said first path and said second path, said second switch being capable of selecting a connection to said ATA disk drive using either said first path or second path **[see Page 3, Paragraph 0030]**

Barth fails to teach an apparatus wherein the two coupling elements are Fiber Channel coupling elements wherein the Fiber channel backplane is coupled to first and second housing. Schimke teaches the above limitations of having Fiber Channel interfaces coupled to FC backplane **[see Schimke, Page 2, Paragraph 0020, "Devices 120-130 are typically peripheral devices such as storage devices with FC interfaces and are coupled to the FC-AL on a backplane provided by hub"]**.

One of ordinary skill in the art at the time of Applicant's invention would have clearly recognized the advantage of combining teachings of Barth with that of Schimke in order to achieve higher reliability during fail over through the employing Fiber Channel Arbitration Loop interconnection system **[Page 2, Paragraph 0020]**. It is for this reason that one of ordinary skill in the art at the time of Applicant's invention would have been motivated to combine the two teachings in order to achieve higher reliability during fail over through the employing Fiber Channel Arbitration Loop interconnection system **[Page 2, Paragraph 0020]**.

5. **As per Claim 14**, Barth as modified by Schimke above teaches an apparatus including all the limitations as addressed above in rejection of Claim 1. Barth fails to however, teach a second housing containing all the same limitations as the first housing taught by Barth. Although, Barth does not disclose a plurality of housing elements including the cited references, the courts have upheld that mere duplication of parts has no patentable significance unless a new and unexpected result is produced (*see In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)*). It is for this reason that one of ordinary skill in the art at the time of Applicant's invention would have been motivated to provide plurality of housing in effect in order to access more than total of three ATA disks at the same time **[see Barth, Paragraph 0028]**.

6. **As per Claim 31 and 36**, Barth teaches an apparatus comprising:

- (a) Adaptor **[see Abstract, "ATA (Advanced Technology Attachment) controller"]** coupled to a disk drive housing to couple an Advanced Technology Attachment (ATA) disk drive within the disk drive housing to one of a plurality of backplanes **[see Fig. 3, elements 130, 210 and 215 – ports connecting to ATA or SATA storage devices]**

(b) Serial-to-Parallel converter [see Page 4, Claim 14, "...converting serial data to parallel data to enable data to and/or from SATA compliant storage devices"],

wherein said serial-to-parallel convert is capable of receiving a set of serial ATA disk drive signals from a serial ATA disk operatively coupled to said ATA disk drive and emitting a set of parallel ATA disk drive signals [see above cited Page 4, Claim 14]

(c) Parallel-to-serial converter in a second one of the at least two paths [see Page 2, Paragraph 0026, "Another function performed by the port assignment unit is that of the parallel/serial converter i.e., it performs conversion of parallel to serial data signals and vice versa"], wherein the said parallel-to-serial converter is capable of receiving a set of parallel ATA disk drive signals from a parallel ATA disk operatively coupled to said ATA disk drive and emitting a set of serial ATA disk drive signals [see Page 2, Paragraph 0026]

7. As per Claim 4, 8, 11, 12, 17, 21, 25, 28 and 29, Barth as modified by Schimke above teaches an apparatus wherein said switch includes an input port capable of receiving instructions [see Fig. 3, elements 325, 330, 340], said instructions being interpretable by a computing device to control said switch [see Barth Paragraphs 0026 and 0027].

8. As per Claims 13, 15, 20 and 30, Barth as modified by Schimke above teach an Apparatus wherein said second switch is capable of being coupled to a second switching signal [see Barth Page 3, Paragraph 0030]

9. Claims 3, 7, 10, 16, 20, 24, 27, 33, 34, 35, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barth, Schimke and further in view of Gallagher et al U.S. Patent No: 6,742,068 [herein after Gallagher]

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10. As per Claims 3, 7, 10, 16, 20, 24, 27, 33, 34, 35, 37 Barth and Schimke teaches the limitations of Claims 1, 5, 9, 14, 18, 22 and 26, however fail to teach an Apparatus wherein each of said fiber channel back-plane coupling elements includes an port capable of being coupled to a power source, whereby said ATA disk drive coupling is capable of receiving input power from a selectable source. Gallagher however teaches the above limitations of Apparatus wherein each of said fiber channel back-plane coupling elements includes an port capable of being coupled to a power source, whereby said ATA disk drive coupling is capable of receiving input power from a selectable source [see Gallagher, Col. 6, Lines 4-21].

It would have been obvious to one skilled in the art at the time of Applicant's invention to have a power port on the Fiber Channel backplane in order to provide power to the system [see Gallagher, Col. 1, Lines 10-25]. It is for this reason that one of ordinary skill in the art at the time of Applicant's invention would have been motivated to combine the teachings in order to provide power to the overall system [see Gallagher, Col. 1, Lines 10-25].

Response to Arguments

11. Applicant's arguments with respect to claim 1, 5, 9, 14, 19, 22, 26, 31, 36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasjit S. Vidwan whose telephone number is (571) 272-7936. The examiner can normally be reached on 8am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KIM HUYNH can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSV
4/16/07



KIM HUYNH
SUPERVISORY PATENT EXAMINER

4/18/07